

We claim:Sub
anA method comprising:
at a router:

- identifying at least one active communication link to provide an identified
5 active communication link;
 - automatically identifying whether the router needs a new address prefix for
the identified active communication link.
2. The method of claim 1 wherein identifying at least one active
10 communication link includes identifying a plurality of active communication
links to provide a plurality of identified active communication links.
3. The method of claim 2 wherein automatically identifying whether the router
needs a new address prefix includes identifying whether the router needs a
15 new address prefix for each of the plurality of identified active communication
links.
4. The method of claim 1 wherein automatically identifying whether the router
needs a new address prefix for the identified active communication link
20 includes automatically determining whether the router needs to advertise a
new address prefix for use by link endpoints.
5. The method of claim 1 wherein automatically determining whether the
router needs a new address prefix includes automatically determining when
25 the router has not received a prefix advertisement from another router for the
same active communication link.
6. The method of claim 5 wherein automatically determining when the router
has not received a prefix advertisement from another router for the same
30 active communication link includes automatically determining when the router
has not received a prefix advertisement from another router for the same
active communication link within a predetermined period of time.

7. The method of claim 4 wherein automatically determining whether the router needs to advertise a new address prefix for use by link endpoints includes automatically determining whether the router needs to advertise an address prefix for use by link endpoints by soliciting at least one router to advertise.

8. A method to automatically support automatic configuration of a network router comprising:
at the network router:

- automatically assessing each router link to identify active communication links to provide identified active communication links;
- for each identified active communication link:
 - automatically identifying whether the router needs to support the identified active communication link;
 - for each identified active communication link that is identified as needing support, automatically identifying whether that identified active communication link requires at least one network address prefix.

9. The method of claim 8 wherein automatically identifying whether the router needs to support the identified active communication link includes automatically monitoring the identified active communication link for prefix advertisements from another router that is supporting communications for the identified active communication link.

10. The method of claim 9 wherein automatically identifying whether the router needs to support the identified active communication link includes automatically determining that the router needs to support the identified active communication link when no other router has transmitted a prefix advertisement for the monitored identified active communication link.

11. A router comprising:

- first means for automatically identifying at least one active communication link to provide an identified active communication link; and

- second means for automatically identifying when the router needs to provide a new address prefix for the identified active communication link.

5 12. The router of claim 11 wherein the first means is further for automatically identifying a plurality of active communication links to provide a plurality of identified active communication links.

10 13. The router of claim 11 wherein the second means is further for automatically identifying when the router needs to provide a new address prefix for each of the plurality of identified active communication links.

15 14. The router of claim 11 wherein the second means is further for automatically determining when the router needs to advertise a new address prefix for use by link endpoints.

20 15. The router of claim 11 wherein the second means is further for automatically determining when the router needs to advertise a new address prefix for use by at least one link endpoint by soliciting at least one other router to advertise.